structured as disclosed above) is intermediate the compressor rotor **304** and a shaft **308** which is driven by a low pressure turbine section.

The embodiments **200**, **300** of FIG. **13** or **14** may be utilized with the features disclosed above.

Although an example embodiment has been disclosed, a worker of ordinary skill in this art would recognize that certain modifications would come within the scope of this disclosure. For that reason, the following claims should be studied to determine the scope and content of this disclosure.

What is claimed is:

1. A gas turbine engine comprising:

a fan including a plurality of fan blades rotatable about an axis;

a compressor section;

a combustor in fluid communication with the compressor section;

a turbine section in fluid communication with the combustor, the turbine section including a fan drive turbine and a second turbine, wherein the second turbine is disposed forward of the fan drive turbine and the fan drive turbine includes a plurality of turbine rotors with a ratio between a number of fan blades and a number of fan drive turbine rotors is between 2.5 and 8.5; and

a speed change system configured to be driven by the fan drive turbine to rotate the fan about the axis; and

a power density at Sea Level Takeoff greater than or equal to 1.5 lbf/in^3 and less than or equal to 5.5 lbf/in^3 and defined as thrust in lbf measured by a volume of the turbine section in in^3 measured between an inlet of a first turbine vane in said second turbine to an exit of a last rotating airfoil stage in said fan drive turbine.

2. The gas turbine engine as recited in claim **1**, wherein the fan drive turbine has from three to six stages.

3. The gas turbine engine as recited in claim **2**, wherein said number of fan blades is less than 18 and the second turbine has two stages.

4. The gas turbine engine as recited in claim **3**, further comprising a frame structure positioned between the fan drive turbine and the second turbine, and a plurality of vanes associated with the frame structure, and a flow path through said frame structure being part of the volume of the turbine section.

5. The gas turbine engine as recited in claim **3**, wherein the fan drive turbine has a first exit area and rotates at a first speed, the second turbine section has a second exit area and rotates at a second speed, which is faster than the first speed, the first and second speeds being redline speeds, a first performance quantity is defined as the product of the first speed squared and the first area, a second performance quantity is defined as the product of the second speed squared and the second area, and a performance ratio of the first performance quantity to the second performance quantity is greater than or equal to 0.5 and less than or equal to 1.5.

6. The gas turbine engine as recited in claim **5**, wherein the performance ratio is above or equal to about 0.8.

7. The gas turbine engine as recited in claim **6**, wherein the performance ratio is above or equal to about 1.0.

8. The gas turbine engine as recited in claim **7**, wherein the power density is greater than or equal to 3.0 lbf/in^3.

9. The gas turbine engine as recited in claim **1**, wherein said number of fan blades is less than 18 and the second turbine has two stages.

10. The gas turbine engine as recited in claim **9**, further comprising a frame structure positioned between the fan drive turbine and the second turbine, and a plurality of vanes associated with the frame structure, and a flow path through said frame structure being part of the volume of the turbine section.

11. The gas turbine engine as recited in claim **10**, wherein the fan drive turbine has a first exit area and rotates at a first speed, the second turbine section has a second exit area and rotates at a second speed, which is faster than the first speed, the first and second speeds being redline speeds, a first performance quantity is defined as the product of the first speed squared and the first area, a second performance quantity is defined as the product of the second speed squared and the second area, and a performance ratio of the first performance quantity to the second performance quantity is greater than or equal to 0.5 and less than or equal to 1.5.

12. The gas turbine engine as recited in claim **11**, wherein the performance ratio is above or equal to about 0.8.

13. The gas turbine engine as recited in claim **9**, wherein the fan drive turbine has a first exit area and rotates at a first speed, the second turbine section has a second exit area and rotates at a second speed, which is faster than the first speed, the first and second speeds being redline speeds, a first performance quantity is defined as the product of the first speed squared and the first area, a second performance quantity is defined as the product of the second speed squared and the second area, and a performance ratio of the first performance quantity to the second performance quantity is greater than or equal to about 0.8 and less than or equal to 1.5.

14. The gas turbine engine as recited in claim **1**, wherein the fan drive turbine has a first exit area and rotates at a first speed, the second turbine section has a second exit area and rotates at a second speed, which is faster than the first speed, the first and second speeds being redline speeds, a first performance quantity is defined as the product of the first speed squared and the first area, a second performance quantity is defined as the product of the second speed squared and the second area, and a performance ratio of the first performance quantity to the second performance quantity is greater than or equal to about 0.8 and less than or equal to 1.5.

15. A gas turbine engine comprising:

a fan including a plurality of fan blades rotatable about an axis;

a compressor section;

a combustor in fluid communication with the compressor section;

a turbine section in fluid communication with the combustor, the turbine section including a fan drive turbine and a second turbine, wherein the second turbine is disposed forward of the fan drive turbine and the fan drive turbine includes a plurality of turbine rotors with a ratio between a number of fan blades and a number of fan drive turbine rotors is between 2.5 and 8.5; and

a speed change system having a gear reduction, the speed change system configured to be driven by the fan drive turbine to rotate the fan about the axis; and

a power density at Sea Level Takeoff greater than or equal to 1.5 and less than or equal to 5.5 lbf/in^3 and defined as thrust in lbf divided by a volume of the turbine section in inch^3 measured between an inlet of a first turbine vane in said second turbine to an exit of a last rotating airfoil stage in said fan drive turbine.

16. The gas turbine engine as recited in claim **15**, wherein said number of fan blades is less than 18, and the second turbine has two stages.